

Dave Barney, Michael Kobel



REPORT 2010

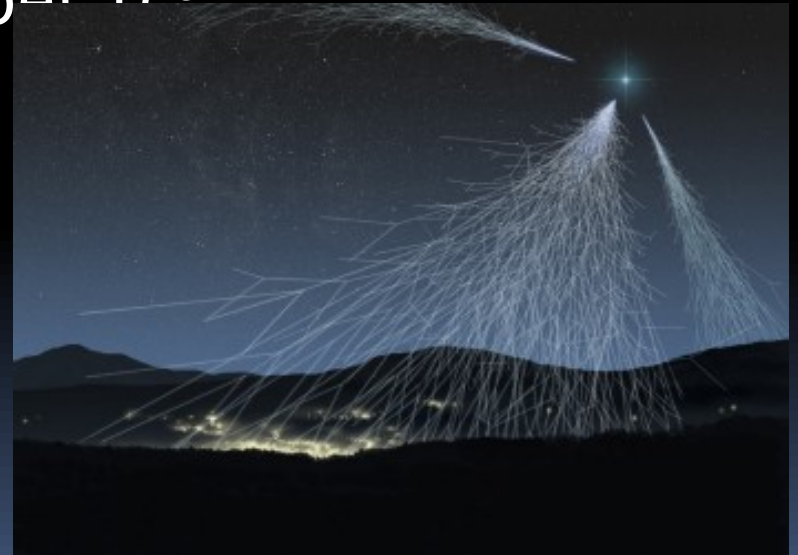
- 2010 activities
- EPPOG database
- Project for 2011-
- Summary

- 2010
 - Employed a 50% FTE (Lisa McCarthy) from March for 8 months to investigate and implement a “best practice” database of outreach materials (as requested in 2009, using funds from CERN DG) – see later
 - **Important Note:** Lisa has played a much larger role in EPPOG than anticipated, helping greatly with all evolutionary aspects
 - Again organized EPPOG Masterclasses in Spring
 - 84 institutes (79 in 2009) throughout Europe + Brazil + South Africa
 - 11 institutes with “teachers” days (8 in 2009)
 - + full US sub-program
 - 22 institutes (23 in 2009)
 - Included participation from Vienna and Shizuoka (Japan)
 - About 6500 participants (4800 in 2009)
 - Very grateful to CERN IT & EVO teams for continued technical support
 - Funding from EPS-HEPP + BMBF + QuarkNet + Helmholtz Association

- EPPOG meeting in Oslo (April 15th-17th)
 - Disrupted by Iceland volcano
 - About 50% of members made it to OSLO
 - And took ~2-3 days to get home!
 - Discussions focused on future LHC-based Masterclasses and database (see later)



- EPPOG meeting at CERN, October 14th
 - Discussions focused on future of EPPOG (see presentation yesterday)
- Also took part in joint EPPOG/EPPCN/ASPERA workshop on cosmic ray detectors on October 15th
 - About 80 participants
 - Discussed existing initiatives in various countries
 - Ideas for a European or worldwide venture





- LHC-based Masterclasses

- Until 2010 all Masterclasses were based around LEP exercises (identifying particles + measuring Z branching-ratio or α_s)
- Much progress on defining & implementing LHC-based exercises (through help from LHC experiments + EPPOG + Konrad Jende – Gentner Fellow + QuarkNet/I2U2)
 - W^+/W^- ratio (\rightarrow structure of the proton) + $H \rightarrow WW$
 - Z mass + $H \rightarrow ZZ + Z'$
 - Search for di-muon events, reconstruct J/ψ & Y & Z
 - Search for Strange particles
- Real data have started to become available from the LHC experiments, with the promise of more in the future
- **2011 Masterclasses will be fully LHC-based!**



- EPPOG Database¹
 - Lisa McCarthy has been driving force behind its conception and implementation
 - “DocDB” chosen as the underlying database
 - In use by several HEP experiments for > 10 years
 - Very flexible – can include ANY type of file
 - Powerful search engine
 - Good support from main developer (who is also working closely with CMS)
 - ~200 “documents” already included in the database, each of which has many associated files

¹Originally called “best practice” but this has a precise meaning in several countries



Use [Indico](#) for meetings, [CDS](#) for official papers, notes and photos and [EDMS](#) for engineering documents.
For anything else or if in doubt, use [DocDB](#).

Search by title, author, category or keywords [Advanced search](#)
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Documents from Last 20 Days

These documents have been modified in the last 20 days.

modified in the last days.

EPPOG-doc-#	Title	Author(s)	Topic(s)	Last Updated
200-v2	Presentations and Documents for ECFA plenary sessions, 24 & 25th November 2010	David Barney et al.	Presentations	24 Nov 2010
199-v1	Learning with ATLAS@CERN	Outreach ATLAS	7. Ages 25 years+ ATLAS Swedish Educational Kits Greek LHC 2. Educators of 6 - 9 year olds English 7. Educators of 25+ year olds 4. Educators of 12 - 15 year olds Finnish 6. Ages 18 - 25 years 5. Educators of 15 - 18 year olds 6. Educators of 18 - 25 year olds 3. Educators of 9 - 12 year olds German French Individual Teaching Aids 1. Educators of children under 6 ys old	22 Nov 2010
198-v1	The Daily Show with John Stewart - The LHC	Lisa McCarthy	7. Ages 25 years+ a. 0-5 min LHC English Film / Video 5. Ages 15 - 18 years 6. Ages 18 - 25 years Podcast Individual Teaching Aids	22 Nov 2010
196-v1	Sixty Symbols	Bradly Haran	Simulated Animation 7. Ages 25 years+ LHC English Film / Video 5. Ages 15 - 18 years 6. Ages 18 - 25 years Podcast Individual Teaching Aids Real Animation	22 Nov 2010
197-v1	LUCID (Langton Ultimate Cosmic ray Intensity Detector)	Becky Parker	CERN-General Educational Kits English Outreach to Schools 5. Ages 15 - 18 years 5. Educators of 15 - 18 year olds Individual Teaching Aids	22 Nov 2010
193-v2	EPPOG Meeting Minutes - Meeting #27: 14 October, 2010 (at CERN)	David Barney et al.	English	19 Nov 2010
194-v1	SuperK Sonic Booom	Nelly Ben Hayoun et al.	7. Ages 25 years+ Exhibitions-complete LHC	19 Nov 2010

DocDB entry point

Shows most recent documents added to the database

Note the variety of document types:

- presentations
- teaching program
- television clip
- school detector project



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EPPOG Document 182-v1

LHCb Poster - The LHCb at CERN - An International Collaboration

Document #:
EPPOG-doc-182-v1
Document type:
[New EPPOG Document](#)
Submitted by:
[Bolek Pietrzyk](#)
Updated by:
[Bolek Pietrzyk](#)
Document Created:
12 Nov 2010, 09:43
Contents Revised:
12 Nov 2010, 09:43
Metadata Revised:
15 Nov 2010, 14:19

[Update Document](#)

[Update Metadata](#)

[Add Files](#)

[Create Similar](#)

[Watch Document](#)

Abstract:

Purpose:
To increase university students' interest in the LHCb Experiment at CERN

Description:
This is one of 3 posters designed to be displayed on university campuses. This poster shows an image of two LHCb scientists working together followed by some facts on the LHCb collaboration.

Copyright CERN

Files in Document:

- [LHCb Poster \(ENGLISH\) LHCb Collaboration \(Posters-Eng 3.pdf, 499.9 kB\)](#)
- [LHCb Poster \(FRENCH\) LHCb Collaboration \(Posters-Fre 3.pdf, 502.2 kB\)](#)
- [LHCb Poster \(GERMAN\) LHCb Collaboration \(Posters-Ger 3.pdf, 506.8 kB\)](#)
- [LHCb Poster \(ITALIAN\) LHCb Collaboration \(Posters-IT 3.pdf, 508.9 kB\)](#)
- [LHCb Poster \(PORTUGUESE\) LHCb Collaboration \(Posters-Portuguese 3.pdf, 1.4 MB\)](#)

Get all files as [tar.gz](#), [zip](#).

Topics:

- [B. Properties:Language:Italian](#)
- [B. Properties:Target Audience:General Public:7. Ages 25 years+](#)
- [B. Properties:Language:Portugese](#)
- [B. Properties:Language:English](#)
- [B. Properties:Experiments/Related Topics:CERN & Experiments based at CERN:LHCb](#)
- [B. Properties:Target Audience:General Public:6. Ages 18 - 25 years](#)
- [A. Item Type:Posters / Banners:Posters](#)
- [B. Properties:Language:French](#)
- [B. Properties:Language:German](#)

Authors:

- [Marie-Anne Bizouard](#)
- [Sébastien Descotes-Genon](#)
- [Lydia Iconomidou-Fayard](#)
- [Hélène Kerec](#)
- [Guy Le Meur](#)
- [Bolek Pietrzyk](#)
- [Patrick Roudeau](#)
- [Jean-Antoine Scarpaci](#)
- [Marie-Hélène Schune](#)
- [Julien Serreau](#)
- [Achille Stocchi](#)

Related Documents:

- [EPPOG-doc-180: LHCb Poster - The LHCb at CERN - Exploring the Early Universe](#)
- [EPPOG-doc-181: LHCb Poster - The LHCb at CERN - b is for Beauty](#)

Viewable by:

- Public document

Modifiable by:

- [DocDBAdm](#)
- [EPPOG](#)

Example document from LHCb showing multiple files

Note that downloading ALL files in one click is built-in

Related documents are also mentioned (other LHCb brochures in this instance)



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Search Results

EPPOG-doc-#	Title	Author(s)	Topic(s)	Last Updated
126-v1	CERN Brochure - ALICE	Press Office CERN	Italian 4. Ages 12 - 15 years Spanish 7. Ages 25 years+ Polish English Norwegian Danish 5. Ages 15 - 18 years Brochures / Flyers / Leaflets 6. Ages 18 - 25 years ALICE 3. Ages 9 - 12 years French LHC	01 Oct 2010
145-v1	Animation 7 TeV pp collisions from ALICE - 30 March 2010	Pawel Debski	ALICE Real Animation General Public	08 Oct 2010
103-v1	US and the ALICE Experiment	Katie Yurkewicz	4. Ages 12 - 15 years 7. Ages 25 years+ English 5. Ages 15 - 18 years 6. Ages 18 - 25 years ALICE Individual Teaching Aids Fact Sheets LHC	20 Sep 2010
193-v2	EPPOG Meeting Minutes - Meeting #27: 14 October, 2010 (at CERN)	David Barney <i>et al.</i>	English	19 Nov 2010
186-v1	Science Journal - Élémentaire - No. 4: La couleur des particules	Nicolas Arnaud <i>et al.</i>	7. Ages 25 years+ Articles & Journals French LHC	19 Nov 2010
110-v1	CERNland	Antonella Del Rosso	Italian Spanish ATLAS Polish English Game LHCb 2. Ages 6 - 9 years TOTEM ALICE Virtual Tours/non-game Interactives 3. Ages 9 - 12 years German French CMS Individual Teaching Aids LHC	11 Oct 2010
132-v1	CERN Brochure - Destination Universe: The Incredible Journey of a Proton in the Large Hadron Collider	Press Office CERN	7. Ages 25 years+ English 5. Ages 15 - 18 years Brochures / Flyers / Leaflets 6. Ages 18 - 25 years	01 Oct 2010

Powerful search built-in

Example results from search for "ALICE"



- EPPOG database next steps
 - Already a useful resource
 - Interface for entering documents is rather simple and straight-forward
 - Needs better interface for the public/schools/media
 - Need a rating system for the target audiences
 - Would be a keystone to a new EPPOG (IPPOG) web site
 - Manpower required
 - Increasing the contents of the database requires wider community of users
 - Started to announce its availability to EPPCN etc.
 - Fully-defined “content requests” may also help retrieve the right material (see next slides)
 - Will require some low-level maintenance, chasing of materials etc.
 - Manpower!



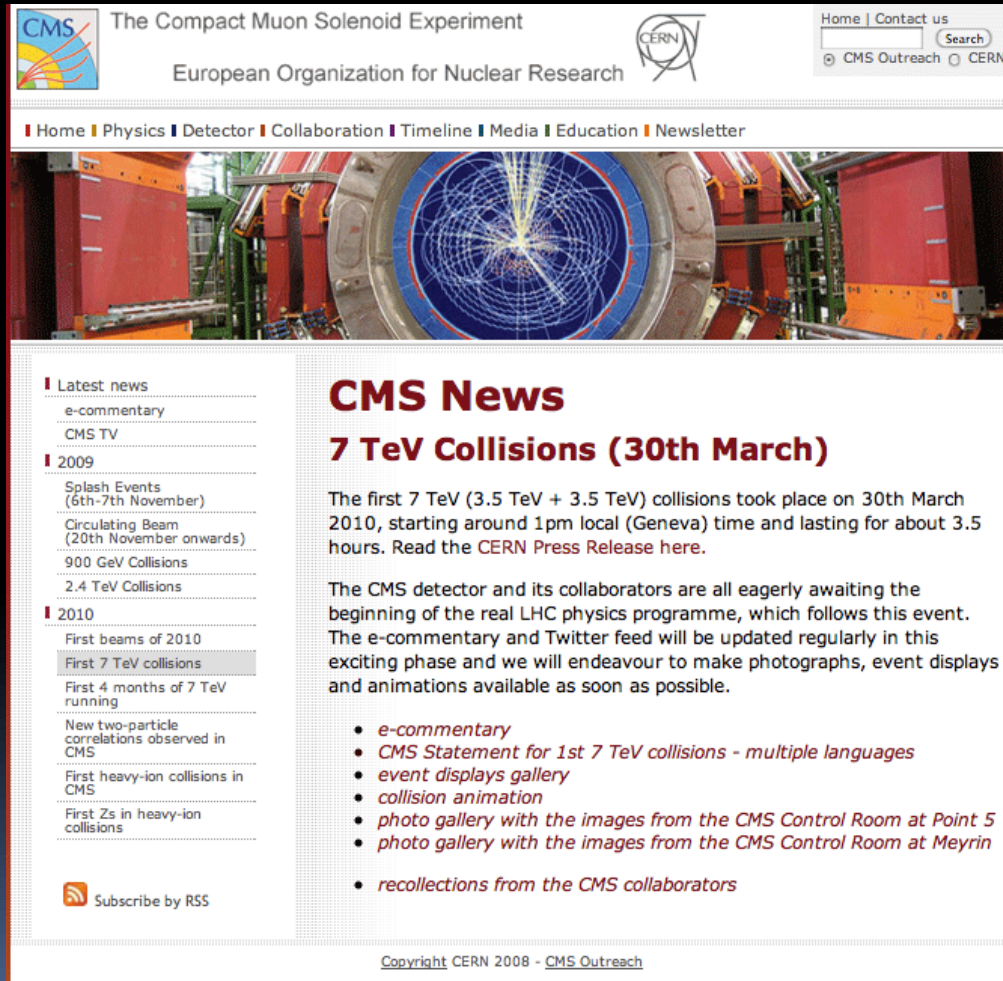
Project for 2011 onwards: “Discovery Packages”

- Ready to go, comprehensive, targeted & effective Education & Outreach packages
- Designed around potential LHC etc. “discovery” topics, e.g.
 - Higgs
 - SUSY
 - Quark-gluon plasma
 - Etc.
- i.e. when a discovery is announced, want a “one-stop-shop” for “everything you ever wanted to know about xxx”

Discovery Package Example: Higgs discovery

- **Press materials**
 - Animations/videos (~20")
 - event displays; explanations of Higgs mechanism etc.; jubilation in seminars
 - Written explanations in multiple languages
 - What has happened? Why is it important? How was it achieved? By whom? What happens now? Has the LHC finished now?
 - Contact persons to be interviewed + briefing notes for interviewees
- **Public materials**
 - As above, plus “standard” presentations and good speakers for public talks etc.
- **Science museums, Science centre resources**
 - As above, plus exhibits, posters, contacts with scientists....
 - (something special in the Globe?)
- **School materials & resources**
 - As above, plus:
 - More detailed explanations (including explanations of the physics)
 - Longer animations/movies
 - Data files + visualization/analysis tools
 - Contacts with scientists
 - Dedicated handouts/simple labs and demos for distribution to schools

Basic example from CMS – 1st 7 TeV collisions



The screenshot shows the CMS website interface. At the top, there is a navigation bar with the CMS logo, the text 'The Compact Muon Solenoid Experiment', the CERN logo, and a search bar. Below this is a secondary navigation bar with links for Home, Physics, Detector, Collaboration, Timeline, Media, Education, and Newsletter. The main content area features a large image of the CMS detector with particle tracks overlaid. To the left is a sidebar with 'Latest news' and a list of articles from 2009 and 2010. The main article is titled 'CMS News 7 TeV Collisions (30th March)' and contains text about the first 7 TeV collisions on 30th March 2010, along with a list of related links and an RSS subscription button.

CMS News
7 TeV Collisions (30th March)

The first 7 TeV (3.5 TeV + 3.5 TeV) collisions took place on 30th March 2010, starting around 1pm local (Geneva) time and lasting for about 3.5 hours. Read the [CERN Press Release](#) here.

The CMS detector and its collaborators are all eagerly awaiting the beginning of the real LHC physics programme, which follows this event. The e-commentary and Twitter feed will be updated regularly in this exciting phase and we will endeavour to make photographs, event displays and animations available as soon as possible.

- [e-commentary](#)
- [CMS Statement for 1st 7 TeV collisions - multiple languages](#)
- [event displays gallery](#)
- [collision animation](#)
- [photo gallery with the images from the CMS Control Room at Point 5](#)
- [photo gallery with the images from the CMS Control Room at Meyrin](#)
- [recollections from the CMS collaborators](#)

Subscribe by RSS

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- “Discovery Packages”: EPPOG (IPPOG) role:
 - Coordinate the requirements for these packages
 - Search for appropriate materials & store them in one place
 - Help organize production of “missing” materials (animations, texts etc.) in collaboration with other bodies when necessary
 - Help with translation
- Will likely require rather small working groups of 2-4 people for dedicated activities e.g. writing a story-board for an animation

- Advantages of this project:
 - It is needed, and no-one is currently doing it
 - Enable powerful ripple effect in understanding & appreciation of particle physics
 - Longer-term effect than Press Releases alone
 - Capitalize on tighter integration with partner entities (CERN, LHC experiments, EPPCN, Interactions, QuarkNet, KEK etc. etc.)
 - Can use the IPPOG database + web-site for material storage/organization/access



- Summary
 - EPPOG (IPPOG) is a motivated set of people with much experience in Education and Outreach
 - Now is the time to capitalize on the public/media interest in particle physics and our group can help
 - “Discovery packages” are a way to integrate many organizations and provide a needed service
 - Dedicated EPPOG manpower (Lisa McCarthy) was a quantum leap in 2010
 - Further progression again requires dedicated manpower
 - 60% FTE for 12 months for organizational aspects and maintenance of the database (e.g. Lisa)
 - 100% FTE for 6-8 months for web-site development (present EPPOG web-site contains only contact details for EPPOG members, links to Indico agendas etc.)
 - (May also need some travel budget available)